DOCUMENT RESUME

ED 221 968 EC 143 299

AUTHOR Jaben, Twila H.
TITLE The Effects of Creativity Training on Learning Disabled Students' Creative Written Expression.
PUB DATE Mar 82
NOTE 11p.; Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY, March 19-23, 1982). Best available copy.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Creative Development; *Creativity; *Divergent Thinking; Intermediate Grades; *Learning Disabilities

ABSTRACT

The effects of a 14 week creativity training program (the Purdue Creative Thinking Program) on the creativity in written expression of 25 learning disabled (LD) students (11 to 12 years old) was measured. The program consisted of 28 audio tapes and printed exercises designed to foster divergent thinking in areas of verbal and figural fluency, flexibility, and originality. A typical session consisted of a 3 to 4 minute segment designed to teach a principle for improving creative thinking, a 10 to 12 minute story about a famous American pioneer, and three or four exercises based on the story content. Analysis of pre- and post-tests on the Torrance Tests of Creative Thinking revealed that Ss in the training group made significantly higher scores than a control group on verbal fluency, verbal flexibility, verbal originality, and the total verbal creativity score. (CL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED221968

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

BEST COPY AVAILABLE

The Effects of Creativity Training On Learning Disabled Students' Creative Written Expression

Twila H. Jaben

Florida Atlantic University

Running head: Effects of Creativity

Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY, March 19-23, 1982)

EC143299

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Twila Jaben
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Abstract

Forty-nine pupils from learning disabilities intermediate level classrooms served as subjects. The Torrance Tests of Creative Thinking were used as pretests and posttests to measure the effect of creativity instruction on the creative writing skills of the subjects. For 14 weeks the Purdue Creative Thinking Program was used to stimulate the learning disabled experimental group's creative thinking. Subjects in the learning disabled experimental group made significantly greater scores than a control group on the creative thinking variables on the verbal (written expression) subtests of the Torrance Tests of Creative Thinking.

The Effects of Creativity Training On Learning Disabled Students' Creative Written Expression

For many years language disorders have been recognized as being characteristic of the learning disabled population (Hallahan & Kauffman, 1976; Johnson & Myklebust, 1967; Wiig & Semel, 1980). According to Johnson & Mykelbust (1967) written expression is one of the highest forms of language and essentially the last to be learned.

Written expression is a skill that is not always systematically taught in the student's daily programming, especially creative writing. There are a limited number of instructional programs developed to train written expression. The instructional program utilized in this study was the Purdue Creative Thinking Program (Feldhusen, Treffinger & Bahlke, 1970), a language oriented training program developed to train creativity in written expression. Creativity is a thinking process that involves helping children learn "how to think" not "what to think." This thinking process trains the divergent thinking dimensions of fluency, flexibility, and originality. Fluency is the ability to generate many ideas, flexibility is the ability to generate ideas in many different categories, and originality is the ability to generate unique ideas. These dimensions are important in

training written expression skills.

The purpose of this study was to examine the effects of creativity training on learning disabled students' creativity in written expression. One question evolved from the purpose. Do students who have participated in the Purdue Creative Thinking Program attain greater written expression scores on the Torrance Tests of Creative Thinking (Torrance, 1974) than students who have not participated in the program?

Methods

Subjects

A total of 49 students (11-12 years old) who could read at least at the 3.0 grade level participated. Their reading ability was ascertained using the Passage Comprehension and Word Identification subtests of the Woodcock Reading Mastery test (Woodcock, 1973). The 49 subjects (40 boys, 9 girls) had been formally diagnosed by learning disabilities specialists as learning disabled. They were randomly assigned to an experimental and control group. All of them were enrolled in intermediate-level learning disabled self contained classrooms. There were 25 subjects (20 boys, 5 girls) in the learning disabled experimental group and 24 subjects (20 boys, 4 girls) in the learning disabled control group.

Instructional Program

The Purdue Creative Thinking Program was used as the independent treatment variable. This program consists of 28 audio tapes and printed exercises designed to foster divergent thinking abilities in the area of verbal and figural fluency, flexibility, and originality. Each component consists of three parts: (a) a 3-to-4 minute segment designed to teach a principle for improving creative thinking, (b) a 10-to-12 minute long story about a famous American pioneer, and (c) three or four exercises related to the content of the story. This program has been widely evaluated, with generally favorable results with both normal and gifted elementary school students (Torrance, 1972. Feldhusen, Clinkenbeard, & Treffinger, in press).

Procedure

Before instruction with the creativity training program began, The Torrance Tests of Creative Thinking, verbal booklet, Form A, was administered to all subjects. The following subtests were used: Just Suppose, Product Improvement, and Unusual Uses. These subtests measure the creativity writing variables of fluency, flexibility and originality. The tests were administered using the standard directions described by Torrance (1974). Ten minutes of working time was provided for each subtest, except for Just Suppose, for which 5 minutes was given to complete the test.

Reliability of the Torrance Tests of Creative Thinking has been established (Torrance, 1974). The mean reliability coefficient for the verbal tests are: fluency .99; flexibility .95; originality .86; and overall average total of approximately .95. The Torrance Tests of Creative Thinking has been found to have both short and long range validity (see Torrance, 1974).

The Purdue Creative Thinking Program was administered for two 45-minute lessons per week for 14 weeks. Within the week after instruction ended the Torrance Tests of Creative Thinking, verbal booklet, Form B, was administered to measure the effects divergent training had on the written language behavior of students.

Analysis of the Data

Analysis of covariance procedures were applied. The posttest Torrance Tests of Creative Thinking scores were used as the dependent variables, and Torrance Tests of Creative Thinking pretest scores were used as covariates. The probability level was set at .05 for all tests of differences between the two groups. Separate analyses were conducted for the three subscores from the Torrance Tests of Creative Thinking: written verbal fluency, written verbal flexibility, and written verbal originality.

Results

Results for the analysis of covariance of the Torrance Tests of Creative Thinking verbal scores are presented in

Table 1. Inspection of Table 1 shows the Purdue Creative Thinking Program was effective in stimulating the scores of the subjects in the experimental group on verbal fluency, verbal flexibility, verbal originality, and total verbal creativity scores.

Insert Table 1

Analysis of verbal fluency scores revealed that the learning disabled experimental group's adjusted mean was significantly greater ($P<.001$) than that of the control group. For verbal flexibility, the learning disabled experimental group's adjusted posttest mean was again significantly greater ($P<.001$) than the mean of the control group. Also, the learning disabled experimental group's adjusted posttest mean for verbal originality was significantly greater ($P<.001$) than the control group. The total verbal creativity scores indicate that the adjusted mean for the learning disabled experimental group was significantly greater ($P<.001$) than the mean for the control group.

Conclusions

The Purdue Creative Thinking Program was successful in stimulating the learning disabled experimental group in written expression on the Torrance Tests of Creative Thinking, verbal booklet. Traditionally, language behavior is stimulated in a structured setting with activities developed to train convergent thinking. The instructional approach utilized in this study to train language behavior differs

from most approaches implemented in special education classrooms in that the activities are developed to train divergent thinking.

It should be noted that one limitation in this initial investigation is the lack of control for the Hawthorne effect. The investigation did not provide for the administration of a "placebo" program to an additional control group. A recommendation for further research in this area would be to include measures to control for the possibility of the Hawthorne effect.

However, based on the significant results of the present investigation, programming such as employed in this study appears to be beneficial in stimulating the creative writing skills of students labelled learning disabled. Therefore, such programming is worthy of further study.

References

Feldhusen, J. F., Clinkenbeard, P. R., & Treffinger, D. J. Creativity instructional materials: A review of research. In D. J. Treffinger (Ed.), Education of the gifted and talented: Research perspectives. New York: Academic Press, in press.

Feldhusen, J. F., Treffinger, D. J., & Bahlke, S. J., Developing creative thinking: The Purdue creativity program. 1970.

Hallahan, D. P., & Kauffman, J. M. Introduction to learning disabilities. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1976.

Johnson, D. J., & Myklebust, H. R. Learning disabilities: educational principles and practices. New York: Grune & Stratton, 1967.

Torrance, E. P. Torrance Tests of Creative Thinking. Reading, Mass. Ginn/Personnel Press, Inc., 1974.

Wiig, E. H., & Semel, E. M. Language assessment and intervention for the learning disabled. Columbus, Ohio: Charles E. Merrill, 1980.

Woodcock, R. Woodcock Reading Mastery Tests. Circle Pines, Minn.: American Guidance Service, 1973.

Table 1

Analysis of Covariance

(ANCOVA) Group Means for Creativity Variables

Torrance Test of Creative Thinking	ANCOVA Posttest
Written Verbal fluency	
LDE	49.68
LDC	29.68
Written Verbal flexibility	
LDE	24.41
LDC	15.34
Written Verbal originality	
LDE	51.37
LDC	33.38
Total Written Verbal creativity score	
LDE	126.24
LDC	79.10